FAA Safety Team | Safer Skies Through Education
FAASTeam

DES MOINES FSDO SAFETY TEAM

FSDO, FAASTeam, FAA Newsletter

Spring Edition 2016

Spring Preflight

Engine compartments, wheel wells, and tail cones may seem inhospitable, but to birds, mice, and insects, such areas look like perfect places to raise families. And this is the time of year that critters nest with gusto. A busy bird can set up a bachelor pad in an engine compartment in one day. And pilots won't be able to spot the out-of-the-way nests with a peek through the oil door. It's necessary to remove the cowling for a full inspection. A set of cowl plugs can discourage birds from entering through the front of the engine compartment. But cowl plugs aren't enough. Some enterprising birds are willing to fly in through the basement, the low-pressure opening around the exhaust stacks. And hangars are no guarantee that an airplane won't become an apartment house for birds. Mice are also on the move this time of year, and though they're usually slower than birds at setting up residences in airframes, they can do tremendous damage to wiring and metal structures. Rodents regard insulation as a delicacy, and after they've been fed, their urine is horribly corrosive to metal aircraft structures. Bees and wasps love aircraft interiors. And even if they've been evicted, insects have an annoying habit of plugging pitot tubes with mud. Don't take any of these stowaways on your first flight of spring. Find out about some post-winter inspection tips in the AOPA Air Safety Foundation's Spring Preflight Safety Hot Spot. (From AOPA April 2009, by Dave Hirschman)

New Student Pilot Application

The FAA issued a rule in early January that requires student pilots to apply for, obtain, and carry a plastic pilot certificate to exercise the privileges of the pilot certificate. Additionally, it modified the process by which student pilots apply for a certificate; they must now apply in person at a Flight Standards District Office, through a Designated Pilot Examiner, with an airman certification representative associated with a part 141 pilot school, or with a CFI.

Student pilots who currently have a paper student pilot certificate may continue to use it, or can request a plastic replacement for $2.

The plastic certificates will not expire, which will give the student unlimited time to complete training without having to apply for another student pilot certificate.

For more information on the rule, which becomes effective April 1, 2016, go to https://federalregister.gov/a/2016-00199

A Temporary Airman Certificate will **not** be issued for use while waiting for the permanent certificate to be received. *The permanent certificate from AFS-760* ***must*** *be in the Student Pilot's possession to exercise solo privileges.*

Small UAS Rule Now in Effect

If you own a drone or other recreational model aircraft, you must register it with the FAA's Unmanned Aircraft System (UAS) registry. A federal law effective December 21, 2015, requires unmanned aircraft registration for small UAS weighing more than 0.55 pounds (250 grams) and less than 55 pounds (approx. 25 kilograms) including payloads such as onboard cameras.

Once you complete the registration process (www.faa.gov/uas/registration), you will be provided with a Certificate of Aircraft Registration/Proof of Ownership along with a unique identification number which must be marked on the aircraft. Owners using the model aircraft for hobby or recreation will only have to register once and may use the same identification number for all of their model UAS. The registration is valid for three years and costs $5.

For more questions and answers about registration, go to www.faa.gov/uas/registration/faqs.

2016 AMT Awards Course Available

The 2016 Aviation Maintenance Technician Awards Program core course, titled "Failure to Follow Procedures – Rationalizations," is now available on the FAA Safety Team website (www.FAASafety.gov). You can find it by searching for course ALC-445 in the site's course catalog or by clicking the Hot Topics banner on the home page. The course is intended to provide an understanding about why policies, procedures, instructions, rules, regulations, and best practices exist and why they are the "safety net" foundation for aviation maintenance safety. The course introduces five of the most common "rationalizations" that mechanics use to justify when they are about to intentionally deviate from these safety nets. Using a fictitious nose gear collapse scenario, the video provides the learner an opportunity to practice seeing and hearing when this "rationalization-mode" is active and shows how to prevent this type of situation from leading to an unsafe condition. The course takes approximately one and a half hours to complete and also counts as training that mechanics with Inspection Authorization (IA) can use toward their IA renewal. So far, feedback on the course has been positive. "I like the examples and the role playing," commented one person completing the course. "The scenario with the technician, pilot, owner and FAA brought out some valuable rationalizations."

The course also introduces five of the most common "rationalizations" that mechanics use to justify when they are about to intentionally deviate from these safety nets.

Congratulations to Maurice Conley for correctly identifying the last mystery aircraft as a Grumman XF5F. Its entire designation is Grumman XF5F-1 Hepcat.

Can anyone guess the identity of this mystery aircraft?

If you can, email the FSDO and we'll include your name in next quarter's newsletter.

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The FAA has released its 2016 to 2036 Aerospace Forecast. The full report can be found at *https://www.faa.gov/data_research/aviation/aerospace_forecasts/*

They are predicting an over-all increase of the general aviation fleet in the U.S. of 0.2 percent driven by corporate jets, turboprops, and helicopters. They are also predicting a decline in piston powered aircraft. The figures are as follows: An overall increase from 203,880 to 210,695 aircraft. An increase of 2.1% for corporate jets, turboprops, and helicopters. A 0.6 decline in piston powered aircraft.

They are also predicting an increase in small hobbyist UAS from 1.9 million units in 2016 to 4.3 million by 2020.

There is a lot more information in this 57-page document including estimates about international aviation.

LINKS TO FAA GUIDANCE

We have received a number of queries about how you can get current FAA Guidance, as it becomes available.

This link takes you to the subscription page for FAA Notifications:

http://www.faa.gov/contact/subscribe/

Near the bottom of the page you will see "How do I subscribe?" In that paragraph, click on the "Quick Subscribe" link and follow the instructions; entering your email address and an optional password. Then, you can check the boxes of the subject matter for notifications you wish to receive.

In short, subscribing allows you to receive emails when the FAA publishes new information in areas such as Air Traffic, Airports, Advisory Circulars, Safety, Regulations and Policy and several others.

And if you are interested in more interesting FAA facts and news, you can go to the home page at www.faa.gov.

Near the top center of the screen, click on "News". On the bottom of that page, you will see "**Subscribe to FAA.gov Web Feeds**". You can choose areas such as News, Press Releases, NextGen and more.

THE 2017 MIDWEST REGIONAL

AIRCRAFT MAINTENANCE SYMPOSIUM

AND TRADE SHOW WILL BE HELD ON

TUESDAY, JANUARY 31 & WEDNESDAY, FEBRUARY 1, 2017

The **2017** Symposium and Trade Show will be held at the Holiday Inn Conference Center near the Des Moines International Airport. **Due to a scheduling conflict**, the Symposium and Trade Show will need to be held **during the week next year**. Thus, the early notification of the dates for the event.

The Iowa Aviation Association, in conjunction with the Iowa DOT Office of Aviation, will sponsor the 26th Annual Symposium in cooperation with the FAA Des Moines FSDO. Additional information will be provided in future newsletters.

We look forward to seeing you at next year's event.

GAJSC Topic of the Month

The General Aviation Joint Steering Committee (GAJSC), including its Safety Assessment Team (SAT), is a joint government and aviation industry group, established with the goal of improving GA safety. The GAJSC/SAT accomplishes this by providing a mechanism for government/industry cooperation, communication, and coordination concerning GA safety issues. In April 2011, the GAJSC chartered the SAT to conduct a review of fatal GA airplane accidents from 2001 through 2010. The SAT reviewed 2,472 fatal GA accidents and identified inflight LOC accidents as the most prevalent cause, with 1,259 fatalities attributed. Currently, GA accidents continue to be responsible for more than 440 fatalities each year in the United States. LOC, mainly stalls, accounted for approximately 40 percent of fatal GA accidents.

Outreach Month: April 2016

Topic: Aircraft Performance and Limitations

The FAA and industry will conduct a public education campaign emphasizing best practices in calculating and predicting aircraft performance and in operating within established aircraft limitations.

Background:
Investigations of General Aviation Loss of Control Accidents often cite inadequacies in predicting aircraft performance and flight operations conducted outside of established aircraft limitations. The GAJSC feels a substantial reduction in general aviation fatal accidents would result from better prediction of aircraft performance and adherence to aircraft operating limitations.

Teaching Points:
Discuss the importance of aircraft performance calculations.
Show pilots how they can assess their individual performance capabilities.
Offer suggestions for increased safety in takeoff and landing operations.
Encourage pilots to explore pilot and aircraft performance with their CFIs.
Provide high level information on where aircraft limitations come from.
Encourage operations within established aircraft limitations.

References:
Aircraft Performance and Limitations Power Point available by contacting the FSDO FAASTeam
Aircraft Weight and Balance Handbook (FAA-H-8083-1A) – Chapter Six
http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/media/faa-h-8083-1a.pdf
Pilot's Handbook of Aeronautical Knowledge (FAA-H-8083-25A) – Chapter Eight
http://www.faa.gov/regulations_policies/handbooks_manuals/aviation/pilot_handbook/
Alaska Off-airport OPS Guide
http://faa.gov/go/flyalaska

GAJSC Topic of the Month (continued)

Outreach Month: May 2016

Topic: Spatial Disorientation

The FAA and industry will conduct a public education campaign emphasizing the dangers of spatial disorientation and optical illusions.

Background:
NTSB accident data suggest that spatial disorientation may be a precursor to many general aviation accidents – particularly in night or limited visibility weather conditions. Instrument and VFR pilots are subject to spatial disorientation and optical illusions that may cause loss of aircraft control.

Teaching Points:
Discuss the physiology and limitations of human sight and balance mechanisms.
Offer responses to typical disorientation and illusion events.
Discuss best practices for preventing Spatial Disorientation.
Discuss local disorientation accidents and/or incidents.
Practical demonstrations of vertigo can be included in the program if a Barany Chair or other vertigo-inducing device is available.

Outreach Month: June 2016

Topic: Engine Maintenance and Performance Monitoring -

Background:
The General Aviation Steering Committee (GAJSC) System/Component Failure work group contends that inadequate engine maintenance has led to a significant number of general aviation power failures. The GAJSC also feel that flight data monitoring can help to forecast system/component problems before they reach the point of failure.

While it's true that most GA aircraft don't have dedicated automatic flight data recording devices now; we will be able to enjoy the benefits of equipage in the future. In the meantime, it's often surprising to see what we already have. Manufacturers are already offering self-contained flight data and visual data recorders for GA airplanes and helicopters. Operators of this equipment must periodically down load and analyze the recorded data – often with the aid of dedicated computer programs.

Many data monitoring operations are less automated. Turbine operators are accustomed to manually recording engine cycle and performance information for trend and engine health analysis. Reciprocated pilots can do much the same thing by tracking engine power, fuel flow, oil temperature and pressure. Panel mounted GPS systems and many hand-held units are already capable of recording position, heading, speed, and altitude. Some engine monitors have recording capability and many aircraft owners participate in oil analysis programs – a tool for gauging engine health and heading off expensive or, in some cases, disastrous problems. Some aircraft – particularly helicopters – are equipped with metallic chip detectors that can forecast engine and transmission failures in time to make a safe landing.

And don't forget basic instrumentation such as Air Speed Indicators, Attitude Indicators, Angle of Attack, Manifold Pressure, RPM, and G indicators – all of which give immediate feedback as to whether design limitations have or are about to be exceeded. When automated equipment becomes available, we'll all know a lot more about the health of the airplanes we fly. Until then – we urge you to consider the information that's already available on every flight.

Teaching Points:
Discuss the safety benefits of proper engine maintenance.
Discuss the safety benefits of Flight Data Monitoring (FDM).
Acquaint pilots with the availability of FDM hardware and software.
Discuss means of manual data acquisition.
Encourage pilots to adopt FDM processes.

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Recent Wright Brother Master Pilot Honorees:

Terry Edmonds
Richard Loven

Upcoming Events

April 4 - Safety Meeting, Cedar Rapids Safety Building

April 21 - Safety Meeting, Marion Airport

April 23 - Safety Meeting, Independence Airport

TBD - DSM ATCT Safety Meetings

TBD - NWS Safety Meeting and Facility

Contact the Des Moines FAASTeam to get a meeting schedule at your location. Meetings are being created all the time, sometimes on short notice. For meeting details visit **FAASafety.Gov**.

To be informed of Safety Meetings of interest to you, be sure to create an account on FAASafety.Gov. All you need is an email address and you will be electronically notified of meetings in your area of interest.

Contact FAASTeam Program Managers Chris Manthe or Joe Quiring, if you have questions or need guidance in setting up your account.

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DSM FSDO Website

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(515) 289-3855 FAX

MONDAY THROUGH FRIDAY

7:45 a.m. – 4:15 p.m.

Visitors are requested to make appointments.

The DSM FSDO will be closed

in observance of a national holiday on:

May 30, 2016 Memorial Day

July 4, 2016 Independence Day

Looking for a New Career

Have you considered working for the FAA?

The aviation industry is fast-paced and always changing.

The FAA is currently seeking qualified individuals to join the inspector workforce and administrative support.

If you are interested, please visit www.usa.jobs

For specific information about the opportunities at the DSM FSDO, please contact:

Robert Watkins (Airworthiness) – 515-289-4845

Michael Heenan (Operations) – 515-289-4815

To receive this newsletter via email, please contact :

Barb Fransen at Barbara.Fransen@faa.gov or 515-289-4818 with your information.

Until next time! Have a safe flight!

Larry L. Arenholz
Des Moines FSDO Manager